Tar Creek and Lower Spring River Watershed Management Plan

Reconnaissance Phase Public Meeting

Picher, Oklahoma
February 24, 2004

Facility Host:
Thank You to Picher-Cardin Schools

Tar Creek and Lower Spring River Watershed Management Plan

Reconnaissance Phase Public Meeting

Welcome!

Meeting Format

- Formal presentation and open house
- Opportunities for questions
  - Formal presentation- 3 minute questions
  - Open house- additional questions
  - Comment forms

Watershed Management Plan Public Meetings

- Series of meetings to update the public on progress
- First meetings held in October 2003
- Next meeting planned for May 2004
- Draft Watershed Management Plan complete August 2004

Meeting Goals

- Provide Update on Federal Agency Memorandum of Understanding Initiatives
- Progress Report on the Technical Team Activities
- Progress Report on the Collection of Existing Data
- Review Progress on Steps 1 and 2 of the Corps Planning Process
- Discuss Section 111 Authority
- Questions and Answers

Watershed Issues

Health Effects

Drainage/Flooding

Subsidence

Water Quality

Mine Shafts

Native American Concerns

Chat Use

Natural Resource Damages

Tar Creek Memorandum of Understanding Update

22 January 2004 – Tar Creek MOU meeting

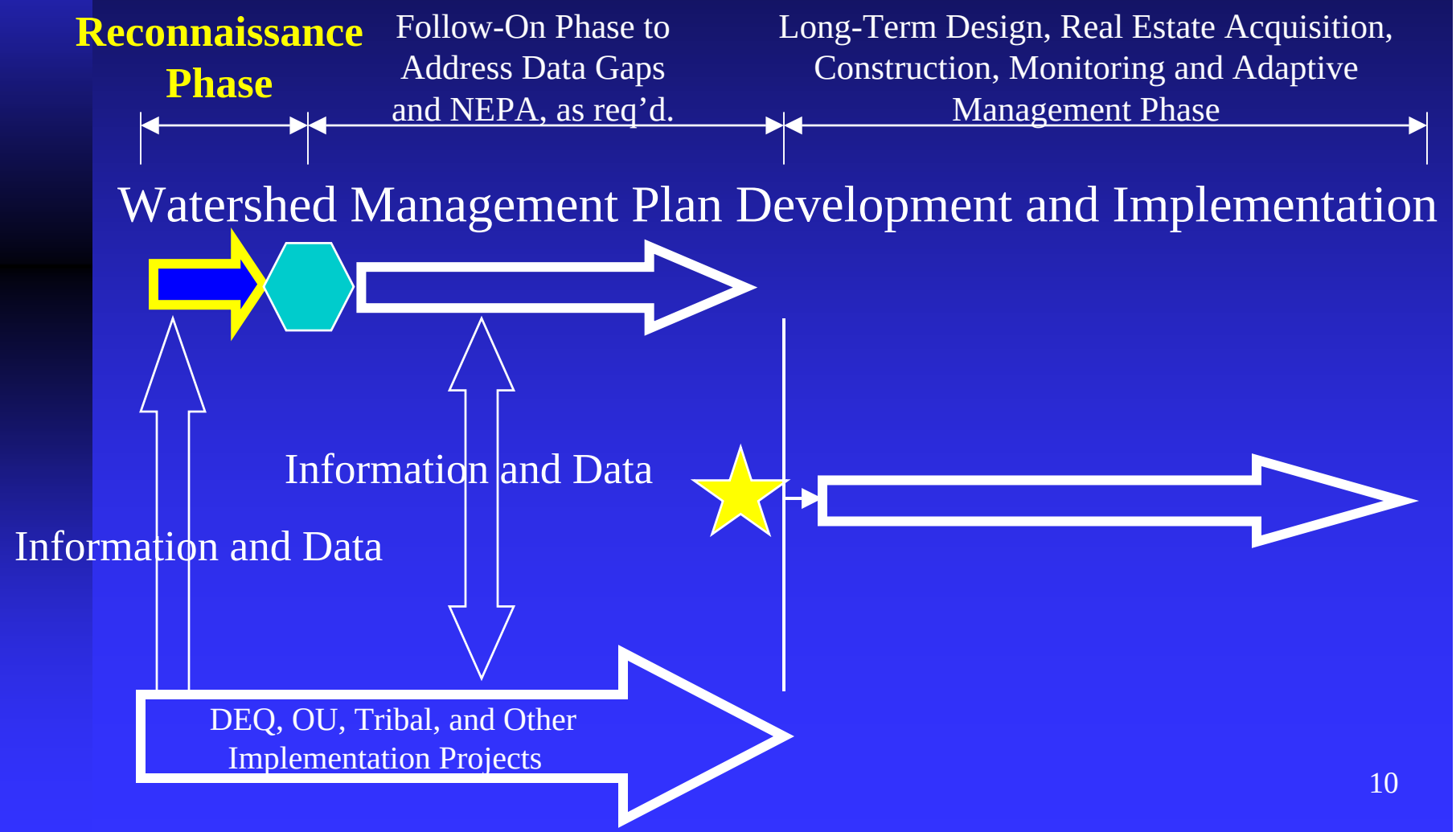
- Coordinated by Mayor Richard Greene, Regional Administrator, EPA Region VI
- Hosted by Brig. General Crear, Commander, Southwestern Division
- Attended by Mr. Jerry Gidner, Chief of Staff to the Assistant Secretary, DoI
- Attended by OK Secretary of the Environment, ODEQ, and Quapaw Tribe

Tar Creek Memorandum of Understanding Update

- Mayor Greene hosted a meeting on 11 February to update “downstream” tribes about the January MOU meeting
- Spring 2004: Public meeting hosted by MOU agencies


Local Stakeholders
Kansas
Picher
Cardin
Spring River
Tar Creek
Missouri
Quapaw
Commerce
North Miami
Miami
American Indian Governments:
•Eastern Shawnee
• Miami
• Modoc
• Ottawa
•Seneca-Cayuga
•Peoria
•Quapaw
•Shawnee
• Wyandotte
Grand (Neosho) River

Proposed Concept Process Timeline w/ On-Going Implementation Projects



Watershed Management Plan Technical Team Update

- November 21, 2003 Initial Technical Team Session (Initiated efforts to form the Technical Team)
- December 16, 2003 Technical Team Session 2 (Team building + agency activity update)
- January 13, 2004 Technical Team Session 3 (Team building + agency activity update + identification of information needed for WMP)
- Focus Sessions in February 2004

Technical Oversight and Guidance Teams Interaction Concept

Watershed Management Plan Other Activities

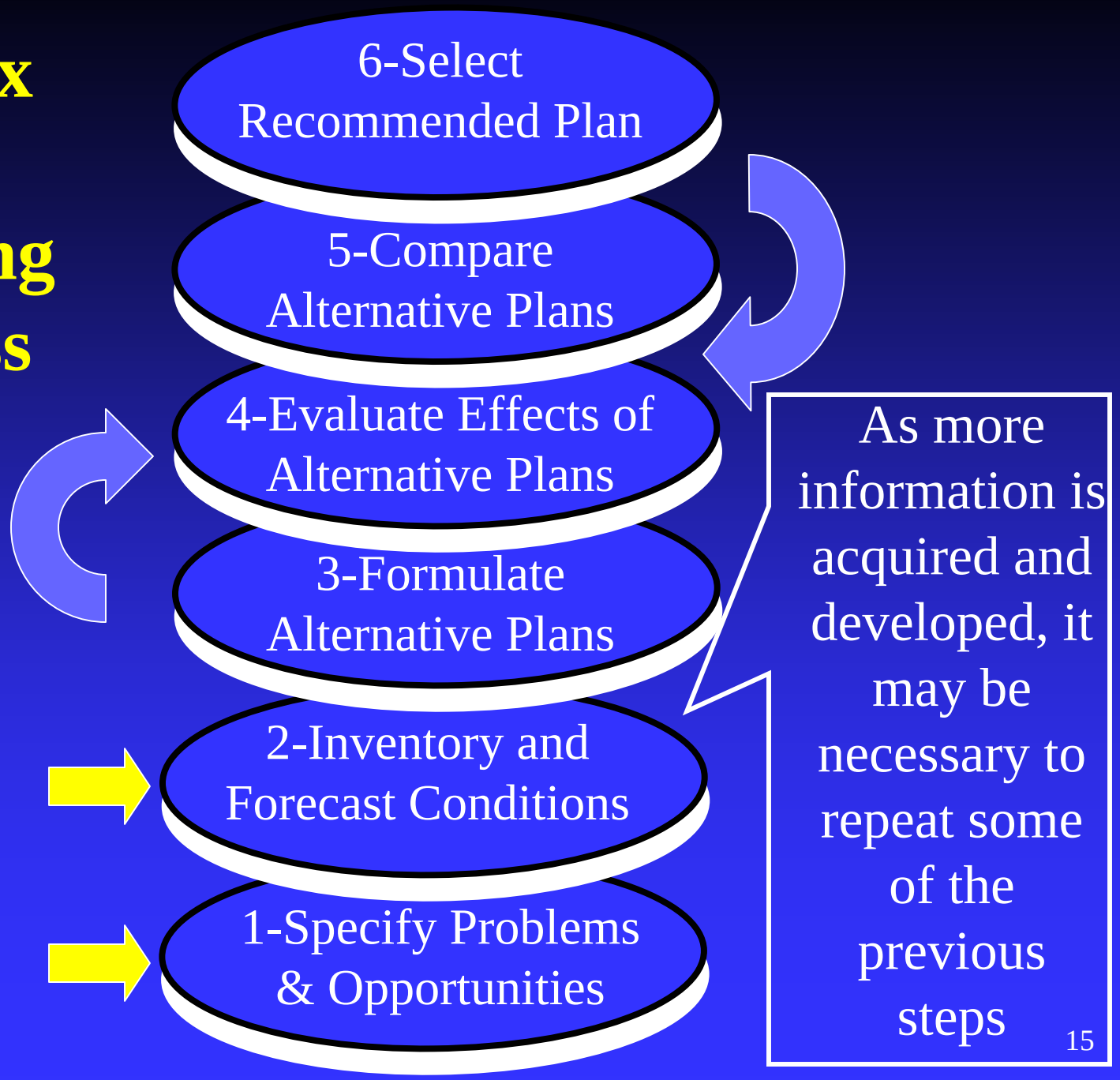
- December 2003 Natural Resources Conservation Service Developed Land Use Maps
- January 15, 2004 Briefing to Kansas Water Office
- February 2004 Briefing to Natural Resources Damages Act Tri-State Stakeholders Meeting

WATERSHED MANAGEMENT PLAN ALTERNATIVES

Over-Arching National Environmental Policy Act (NEPA) Criteria

EPA PROJECTS	+ DEQ, OU, Tribal and Other PROJECTS	+ TRIBAL/ BIA/BLM PROJECTS	+ WMP Complementary Alternatives
RI/FS process and appropriate criteria.	Projects that can be quickly implemented with relatively low risk and yield high benefit outputs. NEPA Exempt ?	Sale of American Indian Owned Chat. NEPA Process underway	Consider Using 30 CFR Part 817 and/or Other Criteria, as Appropriate.

The Six Step Planning Process



Reconnaissance Phase
Tar Creek and Spring River Watershed
Management Plan Development Concept

Major Components of the Watershed Management Plan

Varying Levels of Project Information

COMPLETED AND ON-GOING PROJECTS

\+ DEQ, OU, Tribal, and OTHER IMPLEMENTATION PROJECTS

\+ EPA REGION VI PROJECTS (OU-4)

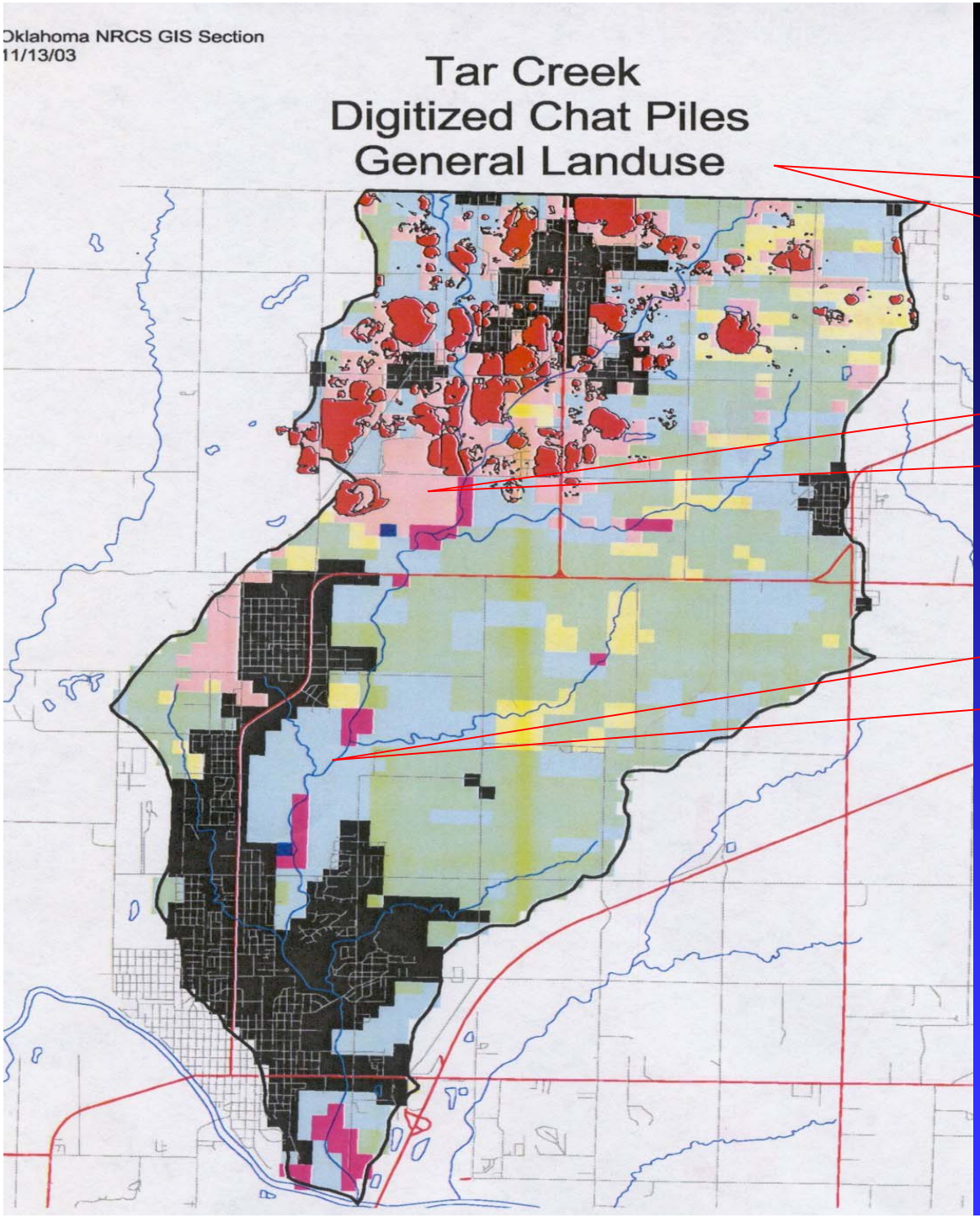
\+ EPA REGION VII FUTURE PROJECTS in KS. AND MO.

\+ BIA PROJECTS

\+ Others (i.e. ATSDR)

\+ WMP COMPLEMENTARY PROJECT ALTERNATIVES

= *WATERSHED MANAGEMENT PLAN ALTERNATIVES*



Incorporate landuse data for the Kansas portion of the watershed

Identify alternatives to address land impaired by mining activities

Identify alternatives to address impaired stream corridors

Legend 1:60000

- Digitized Chat Piles
- Tar Creek Watershed
- Streams

General Landuse

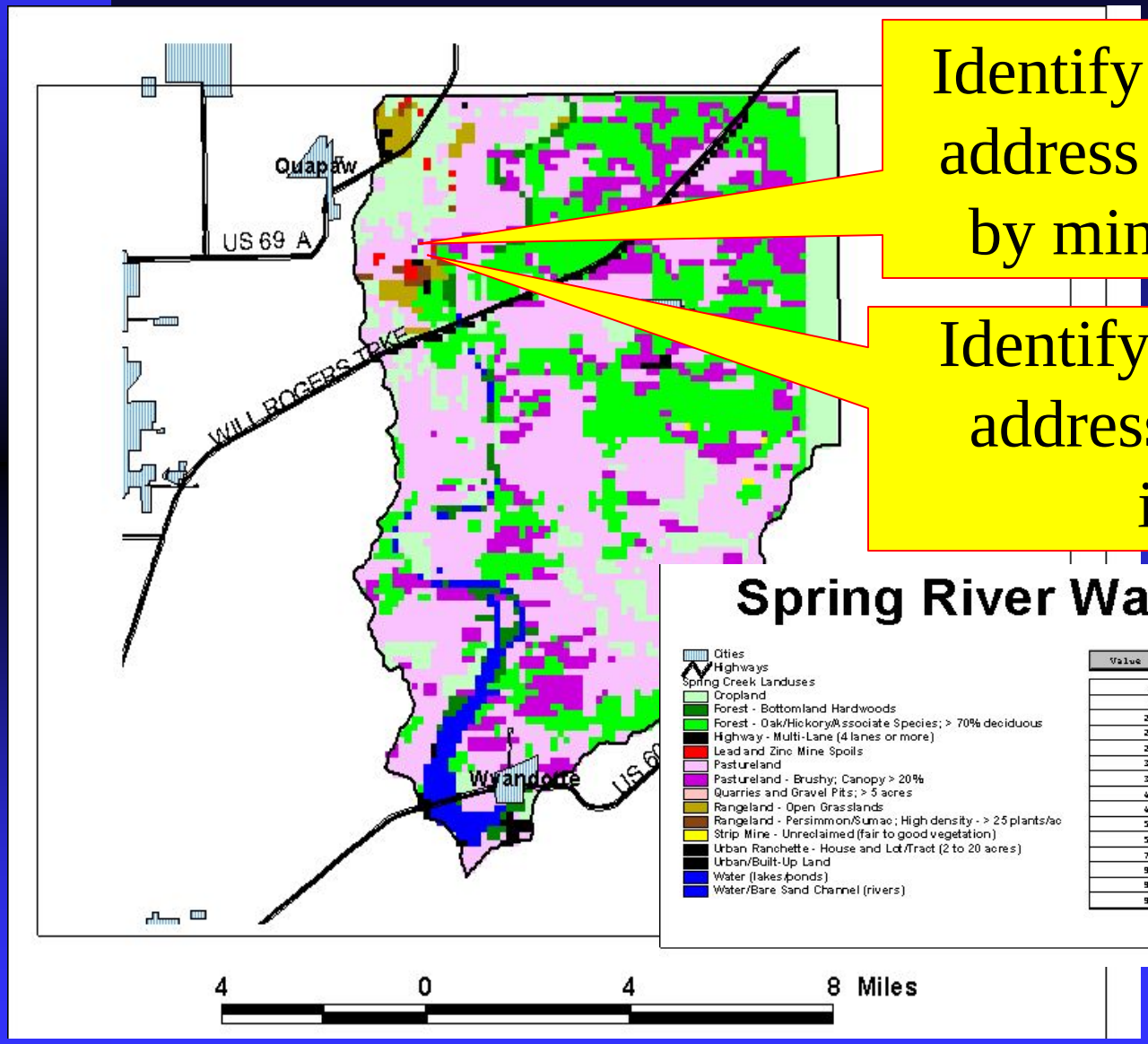
- Cropland
- Forest - Bottomland Hardwoods
- Lead and Zinc Mine Spoils
- Pastureland
- Pastureland - Brushy; Canopy > 20%
- Rangeland - Open Grasslands
- Rangeland - Persimmon/Sumac; High density - > 25 plants/ac
- Urban Ranchette - House and Lot/Tract (2 to 20 acres)
- Urban/Built-Up Land
- Water (lakes/ponds)

Digitized Chat Pile Statistics

Chat Piles: 1540 Acres

Soils under Piles: TaA 1530 ac
PaA 10 ac

Spring River Watershed General Landuse



Identify alternatives to address land Impaired by mining activities

Identify alternatives to address downstream impacts

Spring River Watershed Landuse

Cities
Highways
Spring Creek Landuses
Cropland
Forest - Bottomland Hardwoods
Forest - Oak/Hickory/Associate Species; > 70% deciduous
Highway - Multi-Lane (4 lanes or more)
Lead and Zinc Mine Spoils
Pastureland
Pastureland - Brushy; Canopy > 20%
Quarries and Gravel Pits; > 5 acres
Rangeland - Open Grasslands
Rangeland - Persimmon/Sumac; High density - > 25 plants/ac
Strip Mine - Unreclaimed (fair to good vegetation)
Urban Ranchette - House and Lot/Tract (2 to 20 acres)
Urban/Built-Up Land
Water (lakes/ponds)
Water/Bare Sand Channel (rivers)

Value	Count	Category	Acres
1	618	Cropland	6027
4	79	Rangeland - Open Grasslands	781
20	19	Rangeland - Persimmon/Sumac; High dens	188
25	2660	Pastureland	26281
26	274	Pastureland - Brushy; Canopy > 20%	2635
31	1578	Forest - Oak/Hickory/Associate Species	15512
32	108	Forest - Bottomland Hardwoods	1067
44	16	Urban Ranchette - House and Lot/Tract	158
46	48	Highway - Multi-Lane (4 lanes or more)	484
51	1	Quarries and Gravel Pits; > 5 acres	10
54	4	Strip Mine - Unreclaimed (fair to good	40
70	16	Lead and Zinc Mine Spoils	158
96	40	Water/Bare Sand Channel (rivers)	395
97	33	Urban/Built-Up Land	326
98	132	Water (lakes/ponds)	1304

Activities for March / April 2004

- Formulate Alternative Concept Plans
- Continue Updates to Planning Steps 1 and 2 as New Information is Obtained
- Identify Candidate Sites for Section 111 Projects
- Public Meeting

Example Alternative Stabilization Technology at Rock Springs, Wyoming

Kenoyer Tailings Pilot Project (candidate site)

To Demonstrate Engineering and Construction Technologies

To the Extent Possible at This Pilot Project Site:

- Prior to construction: physical/chemical characterization of mine tailings, groundwater, and surface water.
- Potential construction process could include the use of tailings on the site and specialty mixes, slurry wall partitioning and/or wet handling techniques.

Kenoyer Tailings Pilot Project (candidate site)

To Demonstrate Engineering and Construction Technologies

1. Improve Sub-Surface Stability (reduce the risk of subsidence)
2. Control of Groundwater Flow / Seepage (reduce AMD)
3. Surface / Groundwater Monitoring to Verify Project Objectives are Met
4. Air Monitoring to Verify Performance of Wet-Handling Methods

Kenoyer Tailings Pilot Project (candidate site)

To Demonstrate Engineering and Construction Technologies

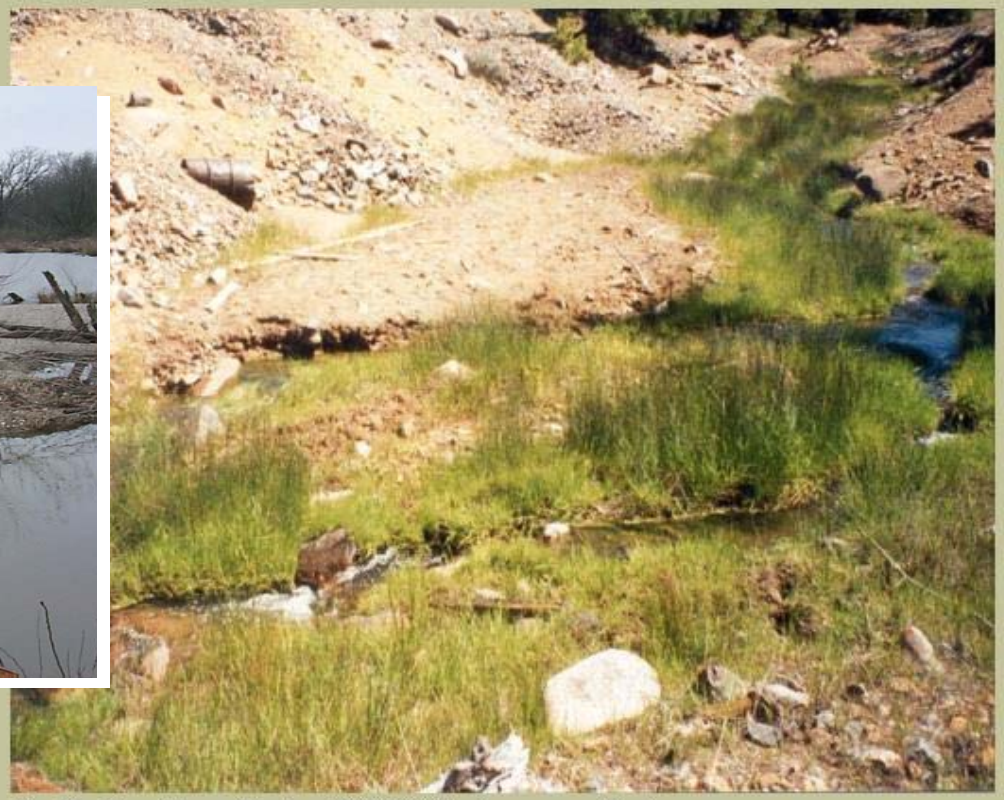
To the Extent Possible at This Pilot Project Site:

5. Land Form to Near Pre-Mining Drainage Characteristics
6. Reclaim Land to Agricultural and/or Natural Prairie (near pre-mine condition)
7. Implement Adaptive Management Construction, if Required

What are the Potential Future Possibilities for Tar Creek?

Example Bureau of Land Management Project at High Ore Creek, Montana

Tar Creek, Oklahoma



Pre-Reclamation - Station 186+00, facing up gradient.

High Ore Creek

Example Project at High Ore Creek, Montana

Reclamation - September 1999. Station 186+00, facing up gradient.

Thank You

Questions?